Warsaw, Poland; ²National Institute of Geriatrics, Rheumatology and Rehabilitation, Department of Pathophysiology and Immunology, Warsaw, Poland

Background: We have previously found that: (i) patients with spondyloarthritis (SpAs) have higher circulating levels of IL-18 and osteoprotegerin (OPG) than healthy controls (1), (ii) psoriatic arthritis (PsA) patients present with more proatherogenic lipid profile and higher IL-18 levels than ankylosing spondylitis (AS) patients (2)

Objectives: To investigate the relationship between disease phenotype, i.e. peripheral arthritis (perPsA n=45), axial PsA (axPsA n=16) and ankylosing spondylitis (AS n=94), cardiovascular risk factors and serum concentrations of IL-18, IL-17.

Methods: A group of 155 SpA patients (94 AS/61 PsA), of similar age (44.5 versus 44.9 years), disease duration (4.8 versus 6.8 years), and matched with high disease activity (AS ASDAS-CRP 3.62±0.94; PsA DAPSA 26.75±26.61) were included in the study. The lipid profile comprised triglycerides (TG), total cholesterol (tChol), low- and high-density lipoprotein (LDL and HDL, respectively) measurement. Ischemic Heart Disease (IHD) diagnosis was established from patient's medical history. Serum concentrations of IL-17AF, IL-18 were measured by specific commercially available enzyme-linked immunosorbent assays (ELISA) and were expressed as medians (pg/ml). The Mann-Whitney test was applied for intergroup comparison, correlation was assessed using Spearman's Rank tests (r value is shown) with linear regression model.

Results: Patients with perPsA had higher rate of IHD than axPsA and AS patients (27% vs 0% vs 7.8%, respectively). perPsA patients had significantly higher diastolic blood pressure than AS patients (perPsA 131±13mmHg vs AS 121±14 mmHg), more severe cardiovascular burden than patients with axial disease, were characterised by higher occurrence of obesity (perPsA 42% vs axPsA 18% vs 18% AS) and hypertriglyceridemia (perPsA 48% vs axPsA 14% vs 16%AS) as well as higher TG concentration (perPsA 165± 87 mg/dl vs axPsA 111± 63mg/dl vs 110± 57 AS mg/dl). Moreover, patients with perPsA had significantly higher serum concentrations of IL-18 than axPsA and AS groups (132.5pg/ml vs 79.2pg/ml vs 84.9pg/ml), but there were no differences between them in IL-17 concentrations. Interestingly, in patients with perPsA, but no other patients' groups, statistically significant associations between IL-18 concentrations and proatherogenic risk factors were found, as IL-18 correlated positively with TC (r=0.31), TG (r=0.53) atherogenic index (r=0.6), and uric acid (r=0.3) concentrations, while negatively with HDL levels (r=-0.47). Although patients groups differ in cardiovascular risk profiles, there were no significant differences in CV risk estimation using SCORE scale (perPsA 2.3% vs 1.6% axPsA vs 2.1%AS)

Conclusion: We conclude that in PsA peripheral joints inflammation is associated with more proatherogenic cardiovascular risk profile and higher IL-18 serum levels, that seem to be interrelated, while patient's disease activity is associated with metabolic syndrome. Generally recommended SCORE scale is practically unable to indicate SpA patients with higher CV risk

References:

- [1] Kontny E, et al. PAB0733 Associations of serum osteoprotegerin and IL-18 concentrations with cardiovascular risk in ankylosing spondylitis and psoriatic arthritis patients *Annals of the Rheumatic Diseases* 2017;76:1310-1311.
- [2] Bonek K et al. ESAT0310 The associations of serumIL-18 and osteoprotegerin (OPG) levels with the lipid profile in psoriatic arthritis (PSA) patients *Annals of the Rheumatic Diseases* 2018;77:1019-1020.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.4101

AB0776

ACCESSORY STAGE IN THERAPY OF PSORIATIC ARTHRITIS WITH ENGINEERED BIOLOGICAL PREPARATIONS

I. Gontar¹, O. Emelyanova¹, O. Rusanova¹, N. Emelyanov², I. Zborovskaya¹.

¹Federal State Budgetary Institution «Research Institute of Clinical and Experimental Rheumatology named after A. B. Zborovskiy», Volgograd, Russian Federation; ²Volgograd State Medical University, Volgograd, Russian Federation

Objectives: increasing the sorption capacity of medications based on interleukin-12 and interleukin-23 in patients with psoriatic arthritis

Methods: To reduce the concentration of anti-inflammatory cytokines (IL-12, IL-23) we ran the blood from psoriatic arthritis patients through granules which had been obtained preliminarily by emulsion polymerization. Antibodies to IL-12 and IL-23 were obtained from the commercial formulation Ustekinumab with a concentration of monoclonal antibodies -0,2mg in 1 ml of saline solution. They were of spherical shape, with gel particle size 10 – 100 mcm. Specific sorption capacity of magnetocontrollable polyacrylamide granules (MPG) was determined using a mini-column with working chamber capacity of 0,2ml, filled

with MPG through which IL-12 and IL-23 solutions (1 ml) were run in increasing concentrations.

Results: Perfusion of the blood through a magnetocontrollable adsorbent was done using a column of 10 ml capacity equipped with an electric magnet; magnetocontrollable polyacrylamide granules with immobilized antibodies to IL-12 and IL-23 were added to the column. This device was used for in vitro processing of heparinized blood from 10 patients with psoriatic arthritis of varying degree of activity who had not received parenteral administration of cytokine IL-12 and IL-23 inhibitors (Ustekinumab) for 12 months. Blood from 10 apparently healthy donors was used as control; the perfusion procedure was the same. The concentration of cytokines (IL-12 and IL-23) in the blood plasma was determined with immunoenzyme assay commercial kits: Bender Med. Systems, USA for IL-12, and Bender Med. Systems, Vienna Austria for IL-23. The parameters under study were determined twice for each sample: prior to and after perfusion. It was established that perfusion through a magnetocontrollable adsorbent leads to a considerable decrease in IL-12: by 99,8% from baseline (in apparently healthy individuals), and by 99,9% in psoriatic arthritis patients; the concentration of IL-23 decreased by 99,9% in psoriatic arthritis patients. That is why decreasing the cytokine level as much as possible is of great practical importance as the cytokines play the leading role in psoriatic arthritis pathogenesis. When comparing data on carbon-based adsorbents found in literature we saw that the cytokine concentration decreased by 92,64% from baseline. Elimination of the cytokines did not bring about any statistically important change in the content of blood corpuscles, which is an additional advantage of the method.

Conclusion: The obtained findings demonstrate high effectiveness of the method of simultaneous sorption of interleukin-12 and interleukin-23 using an original magnetocontrollable adsorbent based on Ustekinumab. The proposed adsorbent shows little traumatism in relation to blood corpuscles, as well as low nonspecific sorption. Extracorporeal elimination of cytokines from the blood flow can be a promising preparatory step in genetically designed treatment of patients with psoriatic arthritis.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.2088

AB0777

EPIDEMIOLOGY, CLINICAL FEATURES AND BIOLOGICAL TREATMENT OF UVEITIS IN 320 PATIENTS WITH PSORIATIC ARTHRITIS. STUDY FROM A SINGLE UNIVERSITY CENTER.

I. González-Mazón¹, L. Sanchez-Bilbao¹, N. Palmou-Fontana¹, D. Martinez-Lopez¹, S. Armesto¹, M. A. González-Gay¹, R. Blanco¹. ¹H. U. Marques de Valdecilla, Santander, Spain

Background: Uveitis is an extra articular manifestation of psoriatic arthritis (PsA). Biological therapy, especially monoclonal TNF inhibitors, are useful to prevent and to treat refractory non-infectious uveitis. However, other biologics had been related to paradoxical uveitis

Objectives: Our aim was to assess **a)** the epidemiological and clinical features of uveitis associated to PsA and **b)** its relationship with biological treatment used in PsA.

Methods: Observational study of unselected consecutive patients studied in a single reference University Hospital with: **a)** diagnosis of PsA by CASPAR criteria and **b)** diagnosis of uveitis by ophthalmologist exploration. Demographics features, clinical findings, complementary tests and treatment were recorded.

Results: We studied 320 (182 women/138 men) patients with PsA; mean age at PsA diagnosis of 41.7±15.79 years and with a delay of diagnosis from the onset of symptoms of 2.6±2.01 years.

Ten patients (4 men/6 women) out of 320 patients (prevalence 3.13%) with a mean age of 42.2 ± 16.8 years were diagnosed of uveitis after a mean follow-up of 10±7.9 years. In all cases, the uveitis had an anterior pattern. Only 1 (10%) of them had a bilateral affection, acute onset in 10 patients (100%), and 4 of them (40%) had a recurrent pattern. The diagnosis of uveitis preceded the one of PsA in 5 (50%) patients in 1.6±0.87 years. In those with a previous diagnosis of PsA, it was done 13.3±10.4 years before the uveitis onset. Only 1 patient (10%) with recurrent unilateral uveitis presented vitritis. In 10 patients the mean number of anterior chamber cells was 2±0.4. Comparison of baseline characteristics and clinical features between patients who developed uveitis and those who did not is shown in **table**.

Only 2 patients (20%) with uveitis received biological therapy. The first one developed its first episode of uveitis after 29 months with etanercept. After the episode, a switch to adalimumab was done, without any other episode of uveitis after 22 months of treatment. The second one was a patient with multiple episodes of recurrent uveitis, who developed new flares with adalimumab, certolizumab and golimumab.

Conclusion: Most of the uveitis had an anterior and unilateral pattern. The onset of uveitis in patients with PsA can either precede or go after the diagnosis of the PsA. HLA B27+ was more frequent in patients with uveitis. Biological therapy did not achieve good answer in patients with recurrent uveitis.

Table.

	Uveitis (n=10)	Non uveitis (n= 310)	p
Baseline general features			
Age, years (mean±SD)	42.2 ± 16.8	46.4 ± 11.9	0.38
Sex, n (m/w) (%)	4/6 (40/60)	134/176 (43.2/56.8)	0.90
HLA-B27, positive %	60	11.8	<0.01
Disease Characteristics			
Axial arthritis, %	40.0	37.0	0.88
Peripheral arthritis, %	80.0	72.9	0.89
Hip affection, %	30.0	20.0	0.71
Enthesitis, %	60.0	40.5	0.55
Dactylitis, %	20.0	29.5	0.77
Scores			
BASDAI (mean ± SD)	3.3 ± 2.08	2.4 ± 1.9	0.26
BASFI (mean ± SD)	2.7 ± 1.9	1.6 ± 1	0.31

Disclosure of Interests: Iñigo González-Mazón: None declared, Lara Sanchez-Bilbao Grant/research support from: Pfizer, Natalia Palmou-Fontana: None declared, David Martinez-Lopez: None declared, Susana Armesto: None declared, Miguel A González-Gay Grant/research support from: Pfizer, Abbvie, MSD, Speakers bureau: Pfizer, Abbvie, MSD, Ricardo Blanco Grant/research support from: AbbVie, MSD, and Roche, Speakers bureau: AbbVie, Pfizer, Roche, Bristol-Myers, Janssen, and MSD

DOI: 10.1136/annrheumdis-2020-eular.5499

AB0778

ASSOCIATION BETWEEN PATIENT-REPORTED OUTCOMES AND DISEASE ACTIVITY IN BIMEKIZUMAB-TREATED PATIENTS WITH PSORIATIC ARTHRITIS

L. Gossec¹, P. J. Mease², A. B. Gottlieb³, A. Ogdie⁴, D. Assudani⁵, J. Coarse⁶, B. Ink⁵, L. C. Coates⁷. ¹Sorbonne Université and Pitié Salpêtrière Hospital, Paris, France; ²Swedish Medical Center and University of Washington, Seattle, United States of America; ³Icahn School of Medicine at Mount Sinai, New York, United States of America; ⁴Hospital of the University of Pennsylvania, Philadelphia, United States of America; ⁵UCB Pharma, Slough, United Kingdom; ⁶UCB Pharma, Raleigh, United States of America; ⁷University of Oxford, Oxford, United Kingdom

Background: Bimekizumab (BKZ) is a humanised IgG1 monoclonal antibody, which selectively neutralises interleukin (IL)-17A and IL-17F. There is support for the BKZ mechanism of action as a novel therapeutic approach for psoriatic arthritis (PsA).¹⁻³ The phase 2b dose-ranging BE ACTIVE study assessed the efficacy and safety of BKZ in patients (pts) with PsA; data are reported elsewhere.⁴ Patient-reported outcomes (PROs) are increasingly recognised as important endpoints in clinical trials.⁵ The Psoriatic Arthritis Impact of Disease-9 (PsAID-9) questionnaire was specifically developed to assess health-related quality of life (QoL) in pts with PsA⁵ and its validity in clinical practice has been demonstrated.⁵⁻⁶

Objectives: To report the association between PsAID-9 score (a PRO) and disease activity response (very low disease activity [VLDA], minimal disease activity [MDA] or Disease Activity Index for Psoriatic Arthritis [DAPSA] remission) during 48 weeks' (wks') BKZ treatment.

Methods: Details of the study design (NCT02969525) are reported elsewhere.⁴ Here, we report the proportion of pts who achieved a PsAID-9 score ≤3, and the association between PsAID-9 score at Wk 48 (range 0–10, where 10 corresponds to worst QoL) and VLDA/MDA (binary states of disease control) or DAPSA (range 0–28 where 0–4 is remission, 5–14 is low, 15–28 is moderate, and >28 is high disease activity) at Wk 12.

Results: Across 206 randomised pts at baseline, 66.5% had psoriasis body surface area (BSA) ≥3%, 18.9% had prior tumour necrosis factor inhibitor (TNFi) exposure, and 63.6% received concomitant methotrexate. A substantial proportion of pts achieved MDA and/or DAPSA remission by Wk 12, which generally increased through to Wk 24 and 48 (**Table 1**). The 160 mg BKZ group saw the highest Wk 48 rates of MDA response (60.0%) and DAPSA remission (45.0%) (**Table 1**). The proportion of pts achieving a PsAID-9 score ≤3 was consistently high across all active treatment arms (**Figure 1**). PsAID-9 score was consistently lower (indicating better QoL) for pts with VLDA or MDA, and those in DAPSA remission (**Figure 2**), indicating that low disease activity was associated with improved PROs.

Conclusion: In BKZ-treated pts, improvements in PsAID-9 were associated with achievement of VLDA/MDA response and DAPSA remission. These results suggest that pts achieving higher disease control have improved QoL.

References:

- Glatt S. Ann Rheum Dis 2018;77:523–32; 2. Glatt S. Br J Clin Pharmacol 2017;83:991–1001; 3. Papp KA. J Am Acad Dermatol 2018;79:277–86; 4. Ritchlin CT. Ann Rheum Dis 2019;78:127–8; 5. Gossec L. Ann Rheum Dis 2014;73:1012–19; 6. Johnson K. Semin Arthritis Rheum 2019;49:241–45.

Table 1. MDA and DAPSA responder rates

Treatment arm	MDA (%) [a]			DAPSA remission (%) [b]		
	Wk 12	Wk 24	Wk 48	Wk 12	Wk 24	Wk 48
BKZ 160 mg (n=40)	47.5	50.0	60.0	20.0	35.0	45.0
BKZ 160 mg LD (n=37) [c]	43.2	59.5	54.1	29.7	48.6	37.8
BKZ 320 mg (n=41)	29.3	36.6	46.3	12.2	19.5	34.1

[a] DBS, pts with missing data were counted as non-responders; [b] DBS, missing data are imputed using last observation carried forward; [c] 160 mg with 320 mg LD at baseline. BKZ: bimekizumab; DAPSA: Disease Activity Index for Psoriatic Arthritis; DBS: dose-blind set; LD: loading dose; MDA: minimal disease activity.

Figure 1. Proportion of patients achieving PsAID-9 score ≤3

Figure 2. Association between PsAID-9 and VLDA, MDA, and DAPSA disease states at Wk 48

Acknowledgments: This study was funded by UCB Pharma. Editorial services were provided by Costello Medical.

Disclosure of Interests: Laure Gossec Grant/research support from: Lilly, Mylan, Pfizer, Sandoz, Consultant of: AbbVie, Amgen, Biogen, Celgene, Janssen, Lilly, Novartis, Pfizer, Sandoz, Sanofi-Aventis, UCB, Philip J Mease Grant/research support from: Abbott, Amgen, Biogen Idec, BMS, Celgene Corporation, Eli Lilly, Novartis, Pfizer, Sun Pharmaceutical, UCB – grant/research support, Consultant of: Abbott, Amgen, Biogen Idec, BMS, Celgene Corporation, Eli Lilly, Novartis, Pfizer, Sun Pharmaceutical, UCB – consultant, Speakers bureau: Abbott, Amgen, Biogen Idec, BMS, Eli Lilly, Genentech, Janssen, Pfizer, UCB – speakers bureau, Alice B Gottlieb Grant/research support from: Research grants, consultation fees, or speaker honoraria for lectures from: Pfizer, AbbVie, BMS, Lilly, MSD, Novartis, Roche, Sanofi, Sandoz, Nordic, Celltrion and UCB., Consultant of: Research grants, consultation fees, or speaker honoraria for lectures from: Pfizer, AbbVie, BMS, Lilly, MSD, Novartis, Roche, Sanofi, Sandoz, Nordic, Celltrion and UCB., Speakers bureau: Research grants, consultation fees, or speaker honoraria for lectures from: Pfizer, AbbVie, BMS, Lilly, MSD, Novartis, Roche, Sanofi, Sandoz, Nordic, Celltrion and UCB., Alexis Ogdie Grant/research support from: Pfizer to Penn, Novartis to Penn, Amgen to Forward/NDB, Consultant of: AbbVie, Amgen, Bristol-Myers Squibb, Celgene, Corrona, Janssen, Eli Lilly, Novartis, Pfizer, Deepak Assudani Employee of: UCB Pharma, Jason Coarse Employee of: UCB Pharma, Barbara Ink Shareholder of: GlaxoSmithKline and UCB Pharma, Employee of: UCB Pharma, Laura C Coates: None declared

DOI: 10.1136/annrheumdis-2020-eular.4204

AB0779

DOES DACTYLITIS/ENTESITIS PREDICT THE RESPONSE TO A SPECIFIC BIOLOGICAL TREATMENT IN PSORIATIC ARTHRITIS?

C. Guillén-Astete^{1,2}, P. Zurita-Prada^{2,3}, C. Urrego-Laurín^{2,3}. ¹Hospital Ramón y Cajal, Madrid, Spain; ²Universidad Europea de Madrid (Campus Villaviciosa), Villaviciosa de Odón, Spain; ³University Hospital Moncloa, Madrid, Spain